

The diagram illustrates a power converter system with the following components and signal flow:

- Input Setpoints:**
 - DC Voltage Set Value** (11) provides V_{dcset} to the **First Controller** (13).
 - Loss Set Value** (12) provides P_{lset} to the **First Controller** (13).
 - HF Output Set Value** (16) provides P_{fset} to the **Second Controller** (20).
- First Controller (13):**
 - Receives V_{dcset} and P_{lset} .
 - Outputs V_{dc} to the **DC Power Supply** (17) and P_{loss} to the **Loss Calculator** (18).
 - Receives P_{loss} from the **Loss Calculator** (18) and P_{dc} from the **DC Output Detector** (14).
- DC Power Supply (17):**
 - Receives V_{dc} and provides power to the **DC Output Detector** (14).
- DC Output Detector (14):**
 - Receives power from the **DC Power Supply** (17) and outputs P_{dc} to the **First Controller** (13).
- Loss Calculator (18):**
 - Receives P_{loss} from the **First Controller** (13) and PL from the **HF Output Detector** (15).
- HF Output Stage:**
 - The **Oscillator** (11) provides a signal to the **Amplifier** (12).
 - The **Amplifier** (12) receives a feedback signal from the **Second Controller** (20) and drives the **Load** (16).
 - The **HF Output Detector** (15) receives power from the **Load** (16) and outputs P_f to the **Second Controller** (20).
- Second Controller (20):**
 - Receives P_{fset} from the **HF Output Set Value** (16) and P_f from the **HF Output Detector** (15).
 - Outputs a control signal to the **Amplifier** (12).

FIG. 2

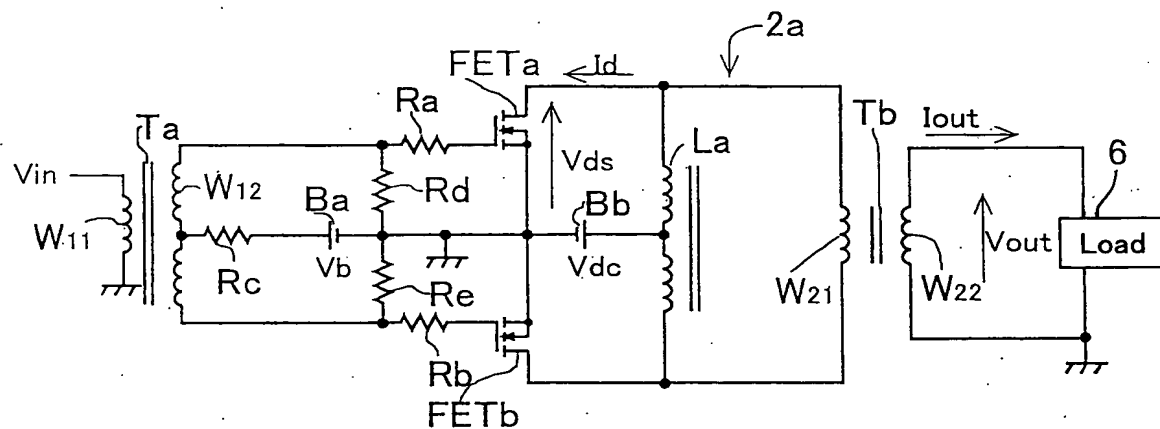


FIG. 3

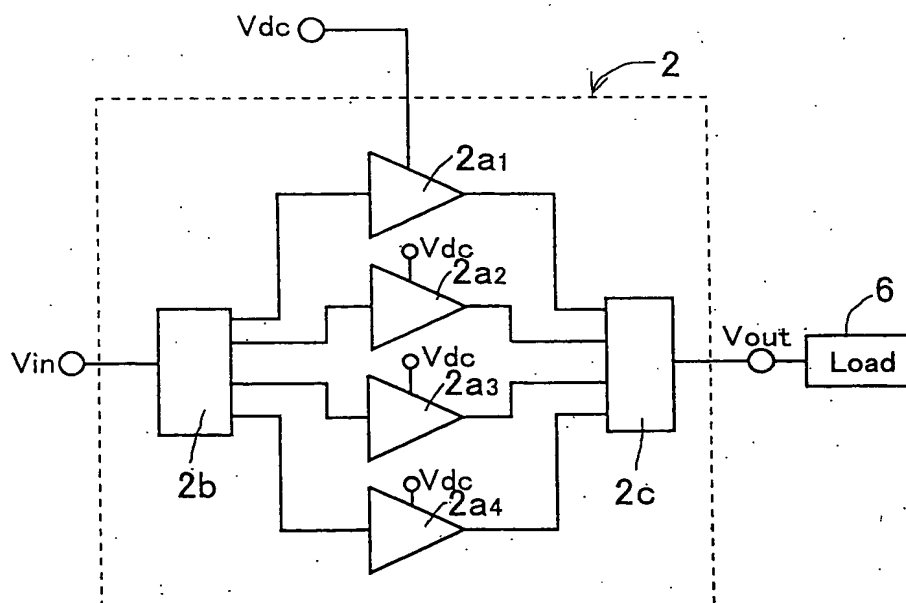


FIG. 4

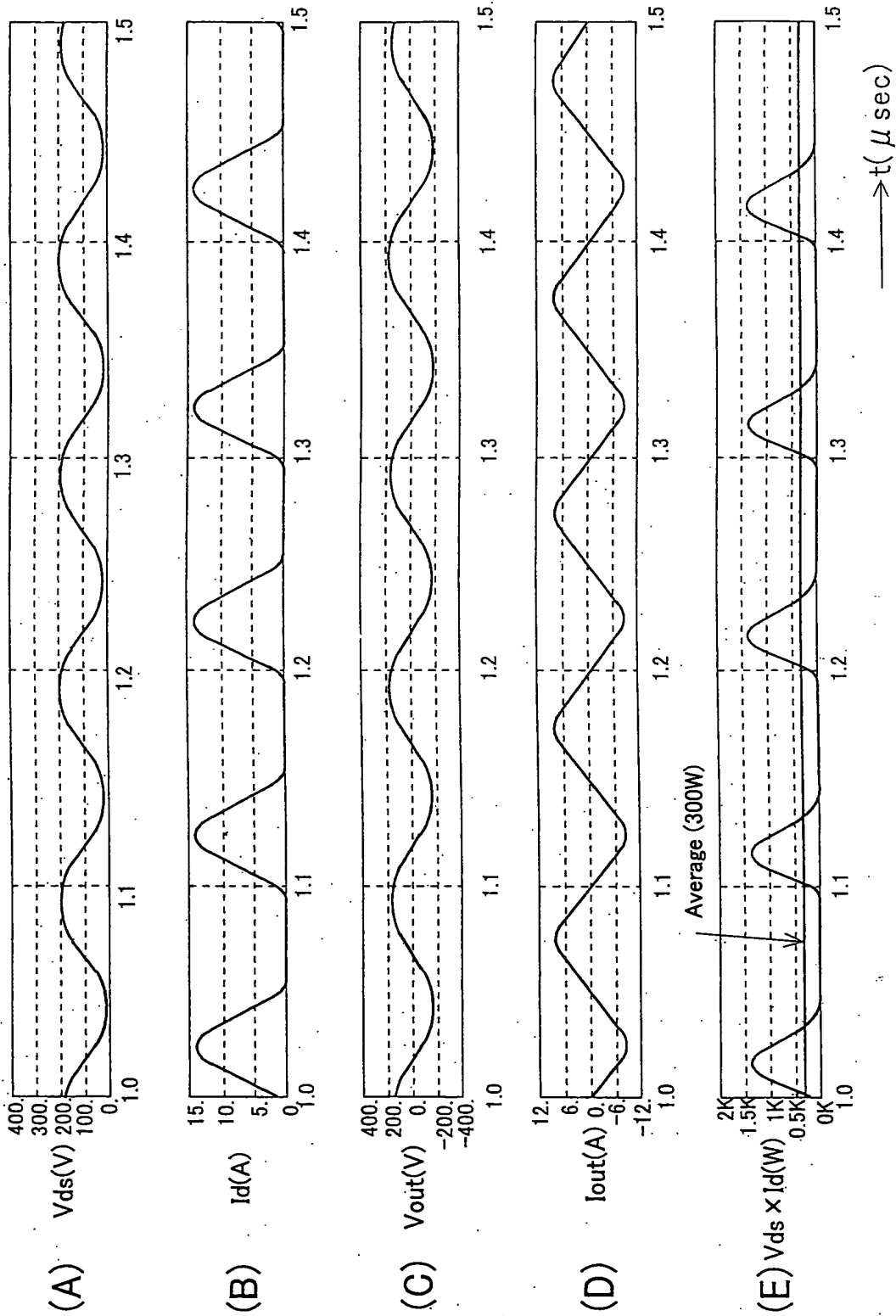


FIG. 5

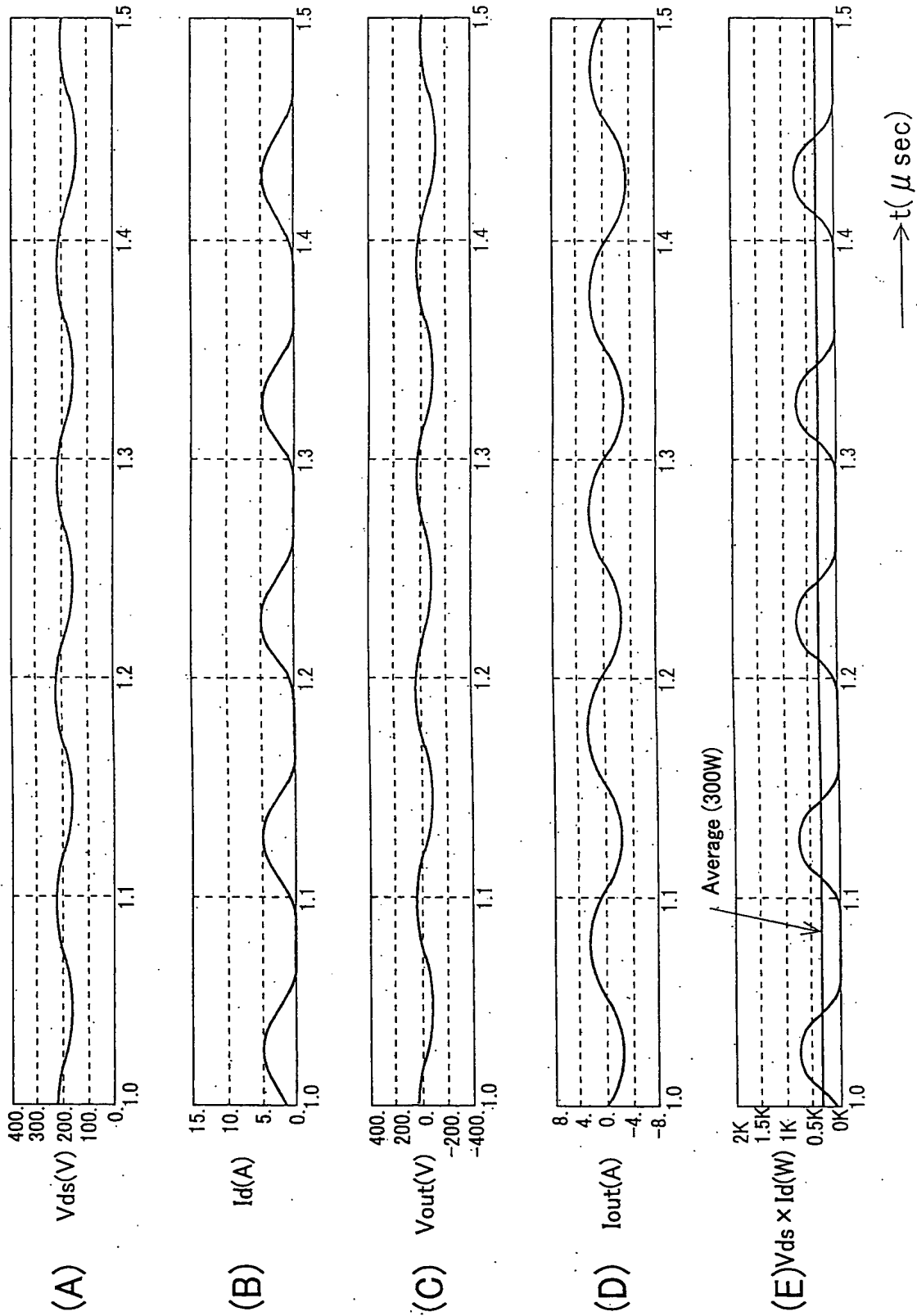


FIG. 6

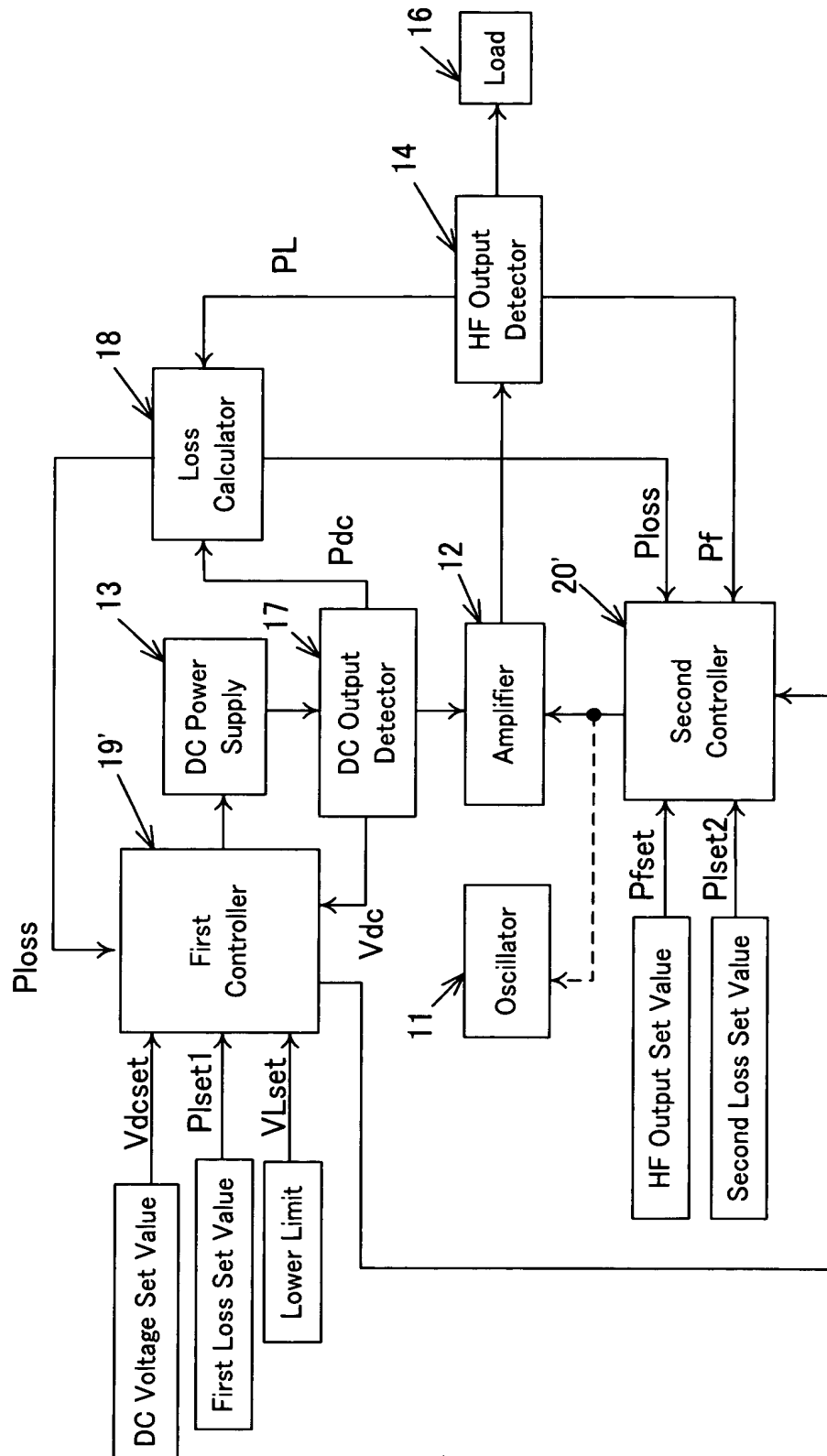


FIG. 7

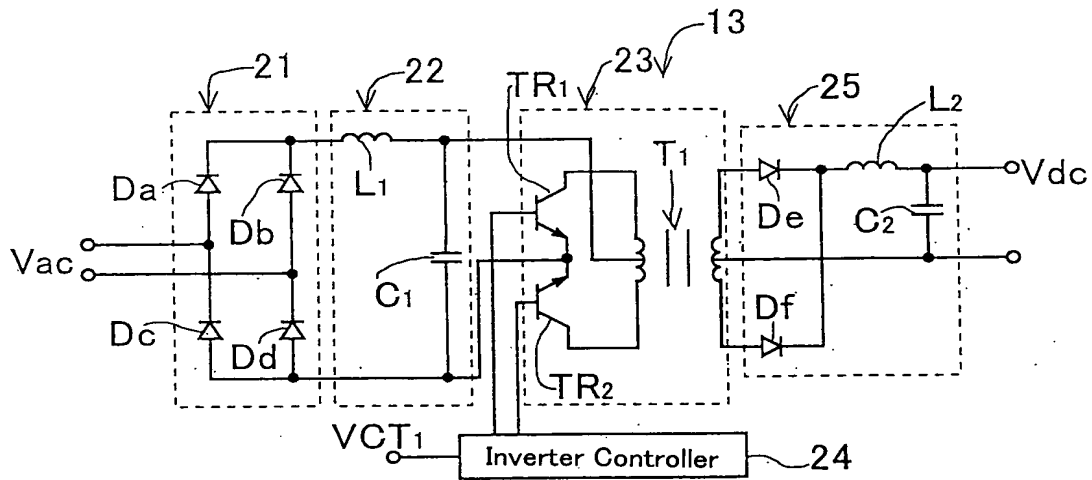


FIG. 8

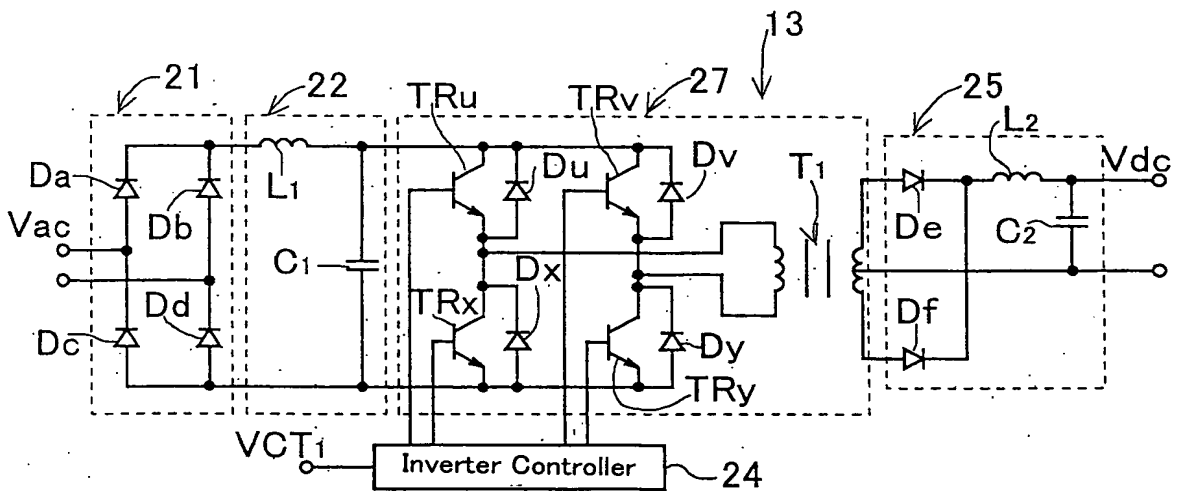


FIG. 9

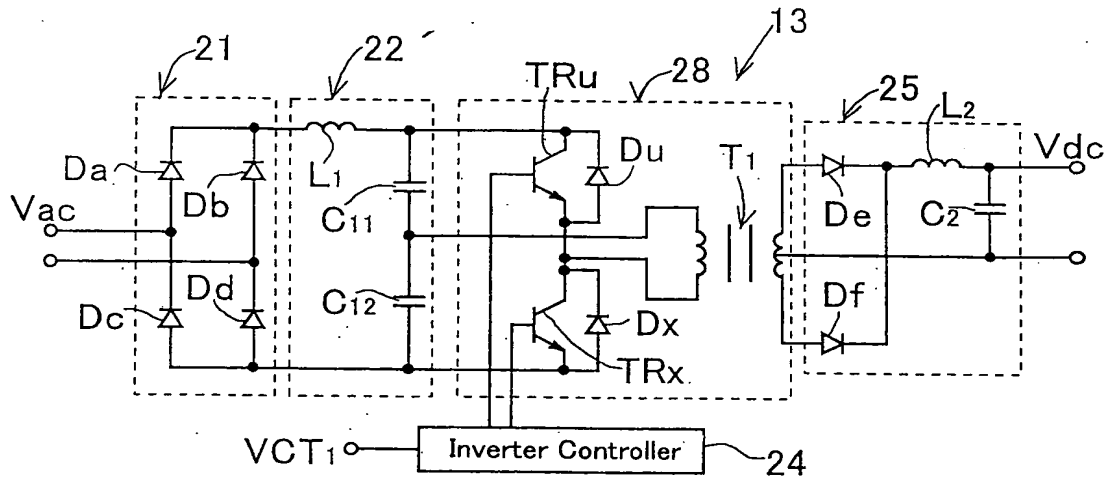


FIG. 10

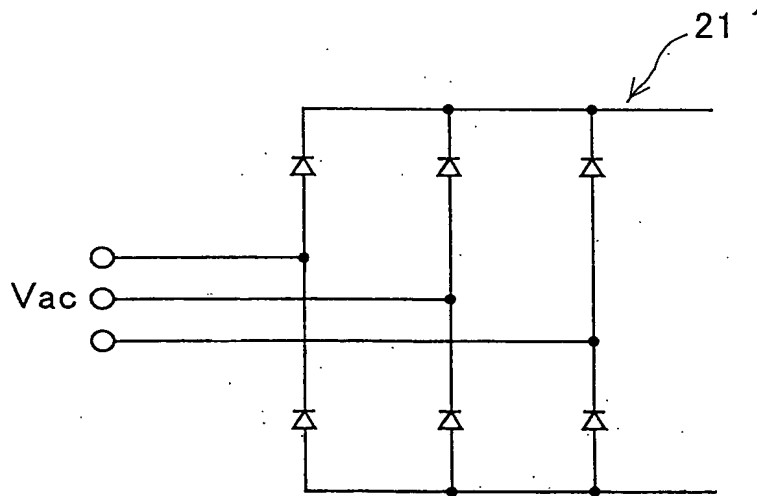


FIG. 11

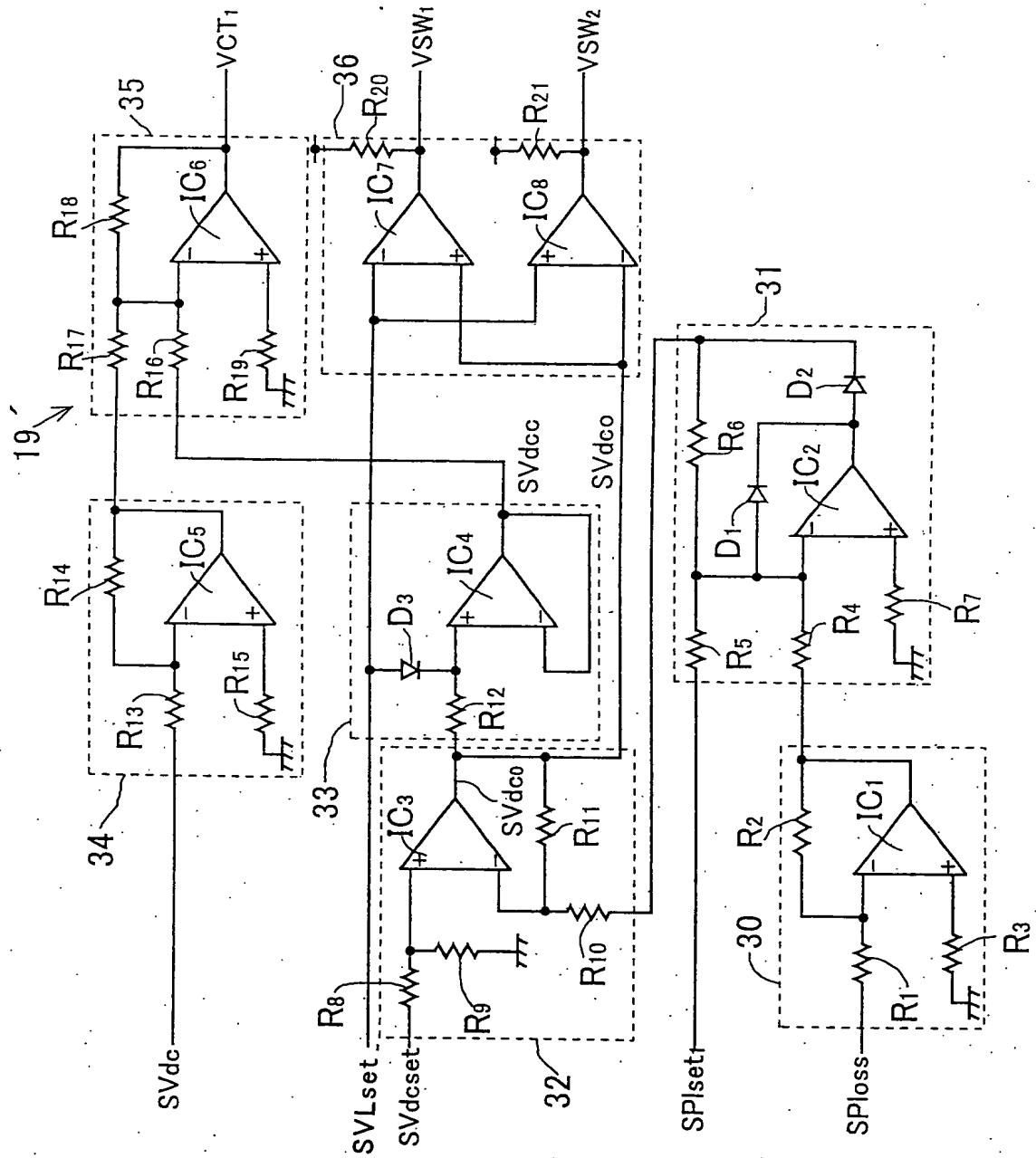


FIG. 12

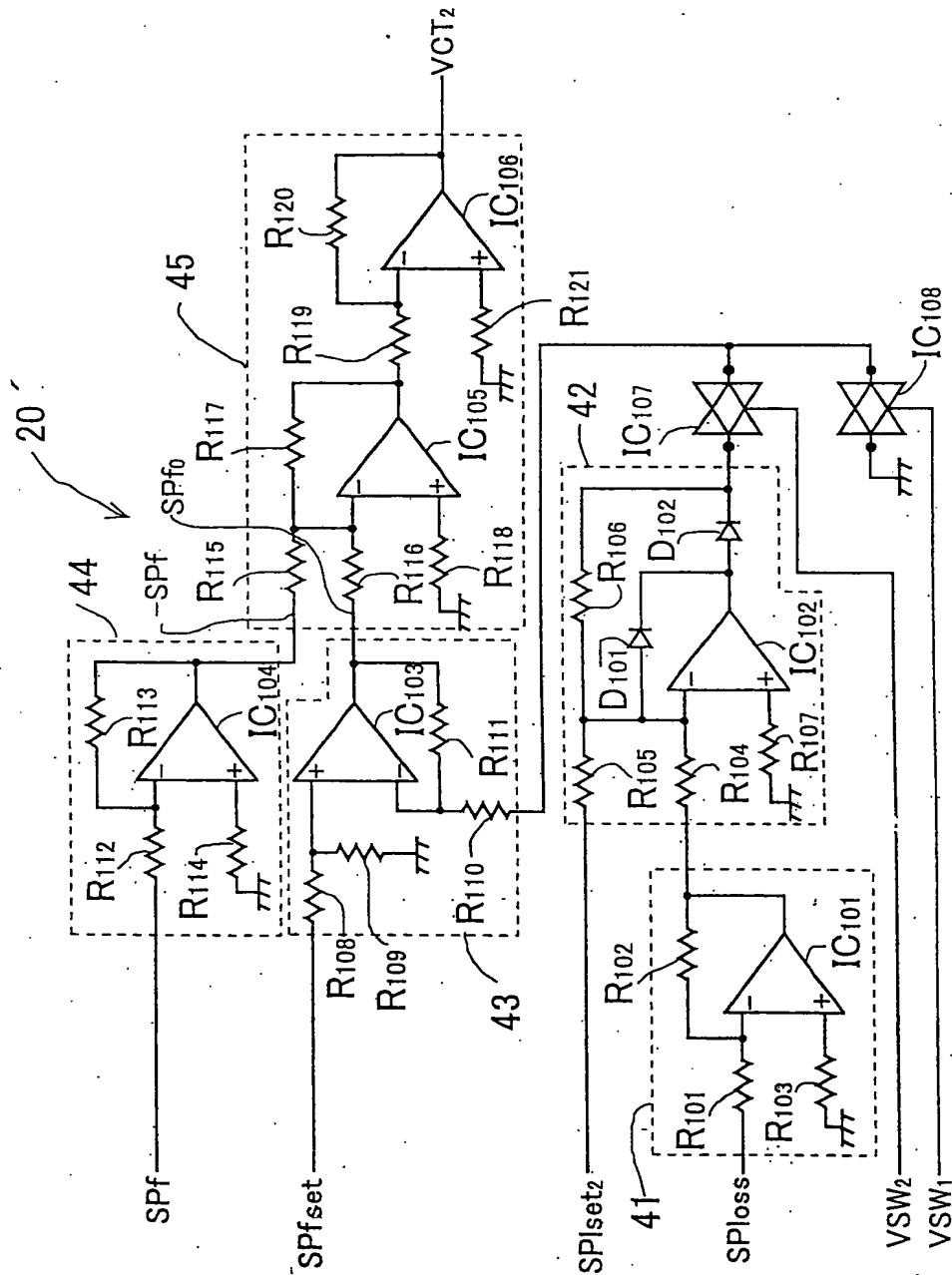


FIG. 13

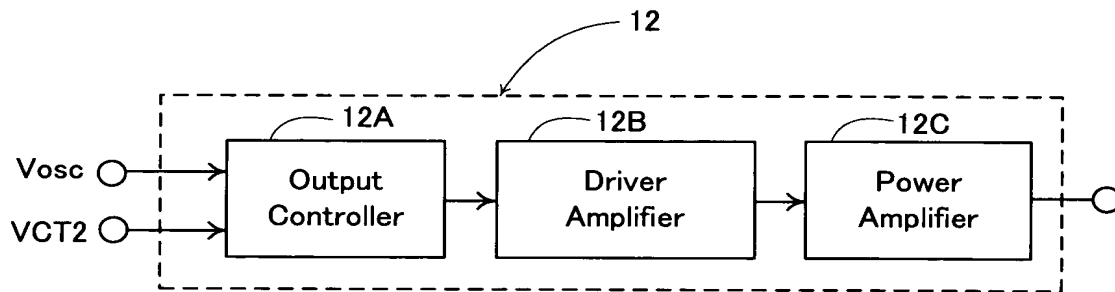
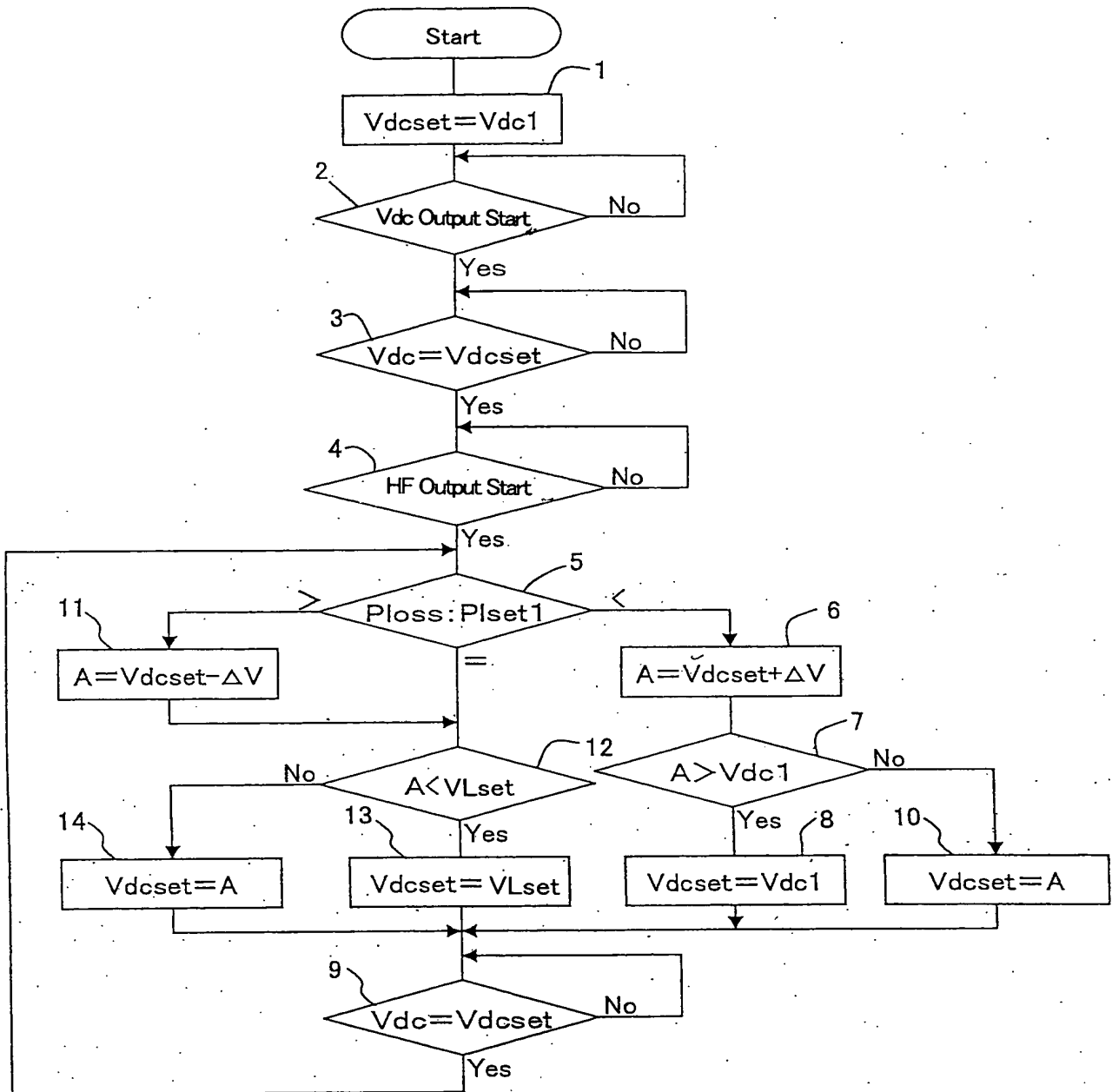
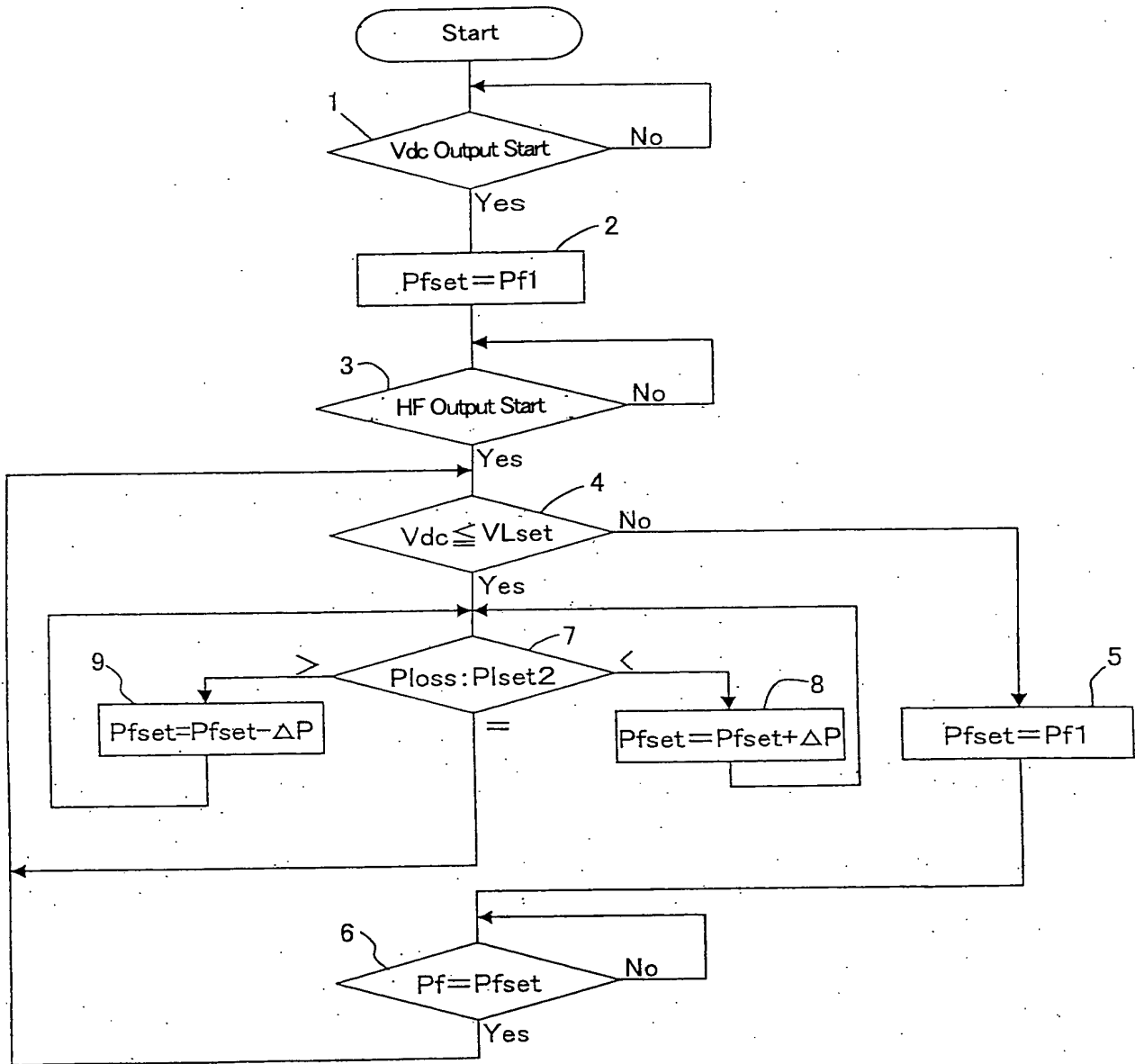


FIG. 14



Vdc ... Output Voltage of DC Power Supply
Vdcset ... Vdc Set Voltage
VLset ... Vdc Lower Limit Set Voltage
Ploss ... Calculated Loss
Plset1 ... First Loss Set Value
Vdc1 ... Normal Output Voltage Set Value (Initial Value) of DC Power Supply
 ΔV ... Fixed Small Voltage Set Value

FIG. 15



Pfset ... Forward Power Set Value
Pf1 ... Forward Power Set Input
Pf ... Forward Power Output Value
Vdc ... Output Voltage of DC Power Supply
VLset ... Vdc Lower Limit Set Voltage
Ploss ... Calculated Loss
Plset2 ... Second Loss Set Value
 ΔP ... Fixed Small Power Set Value

FIG. 16

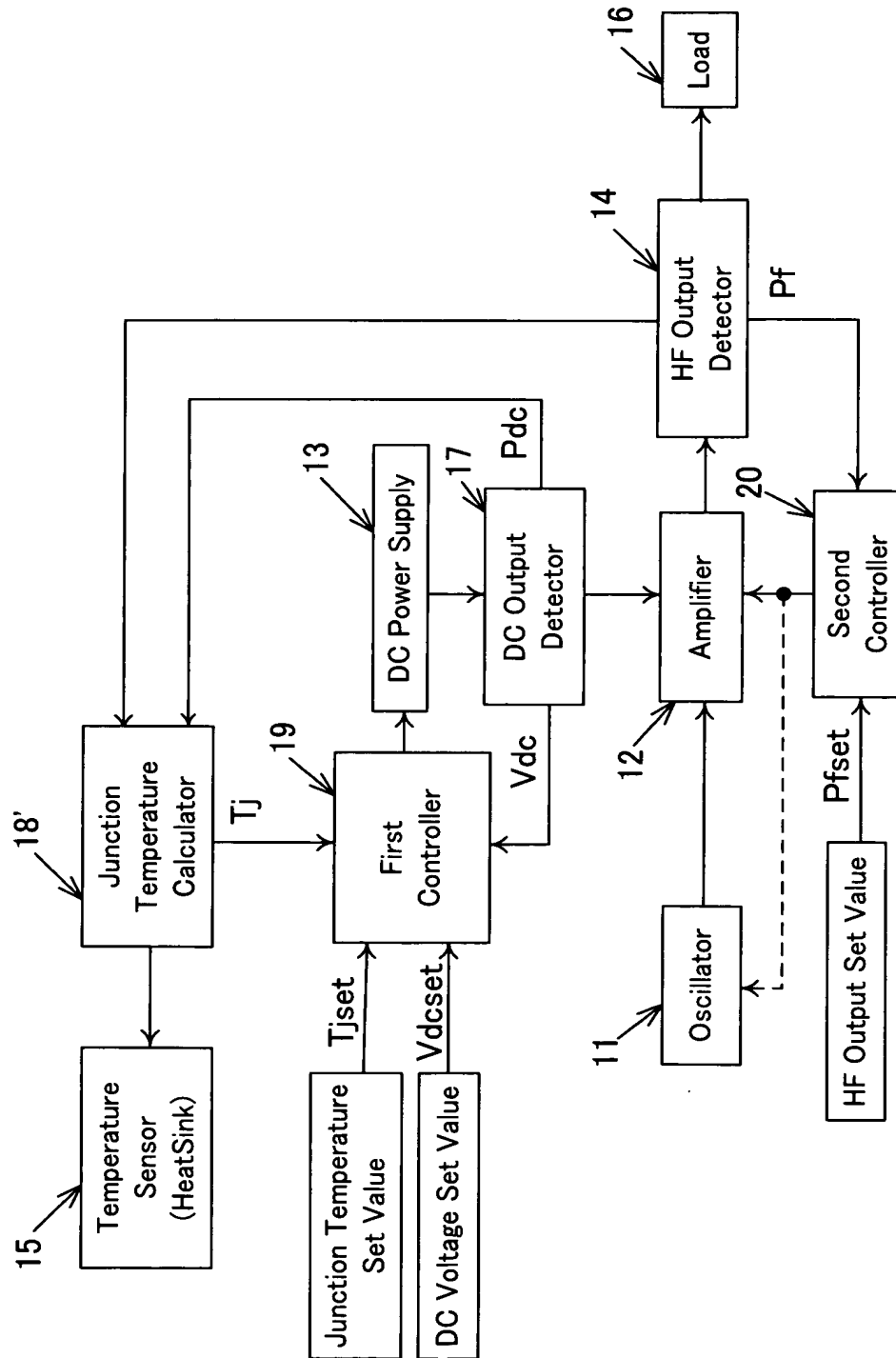


FIG. 17

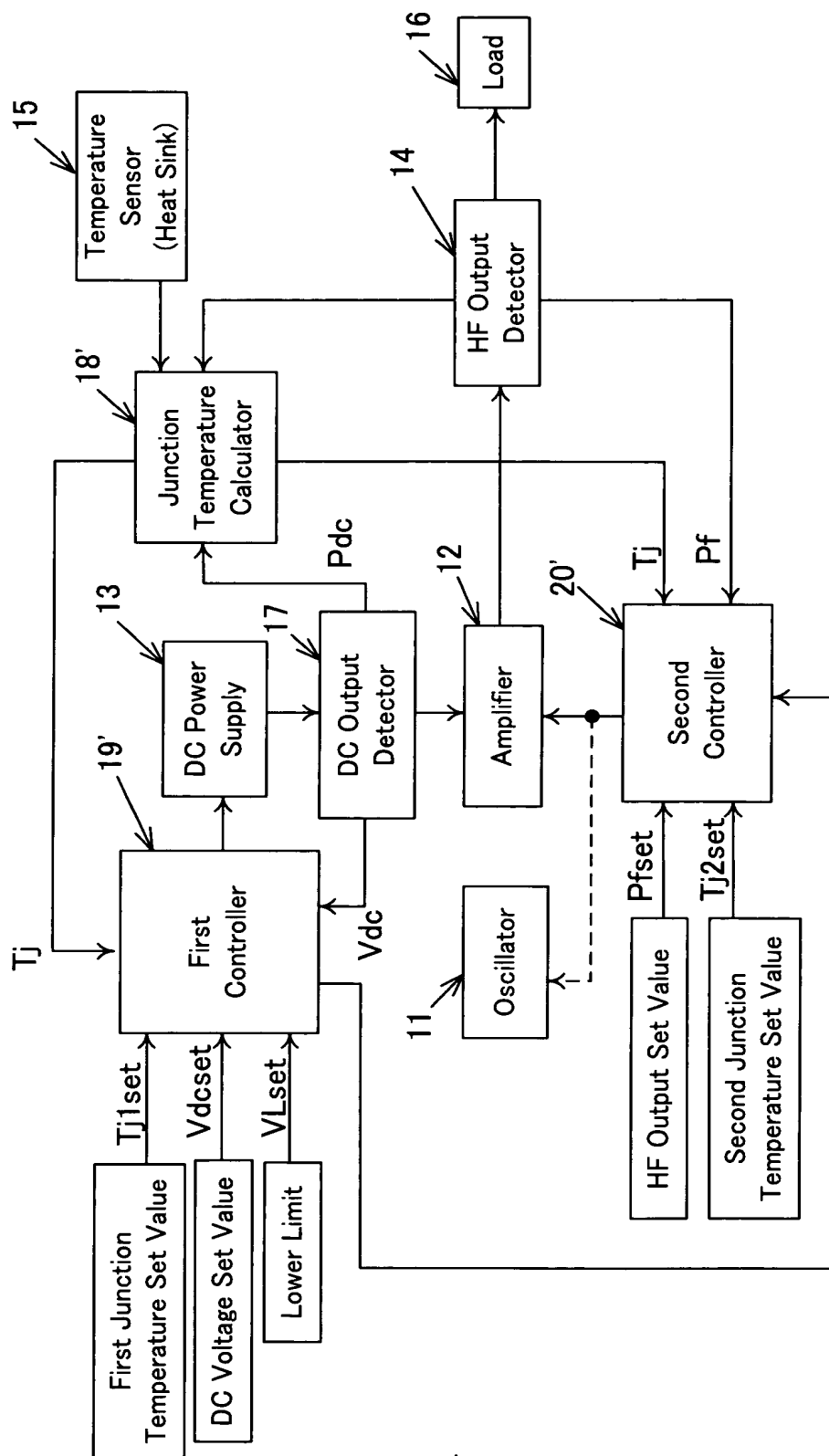


FIG. 18

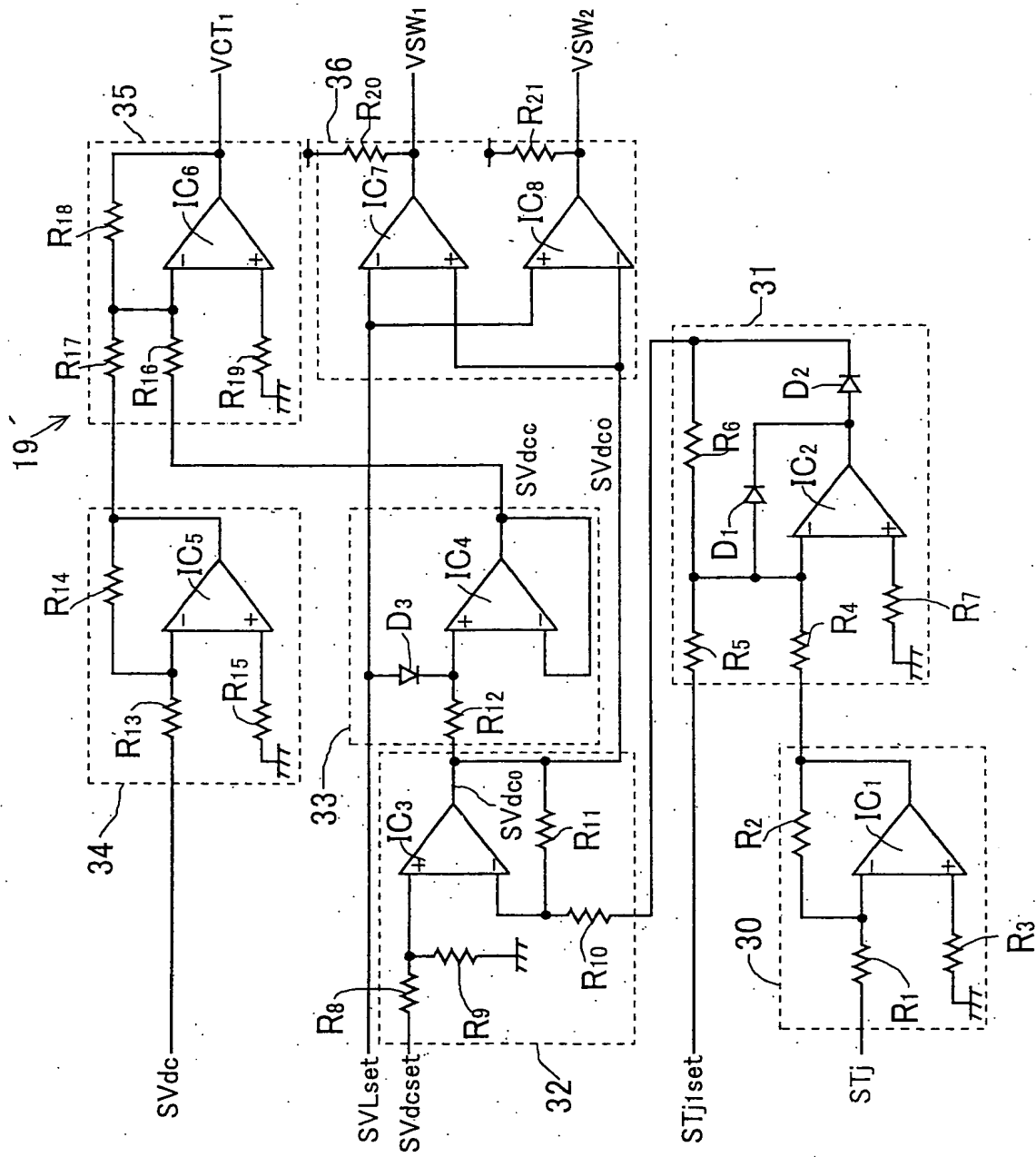


FIG. 19

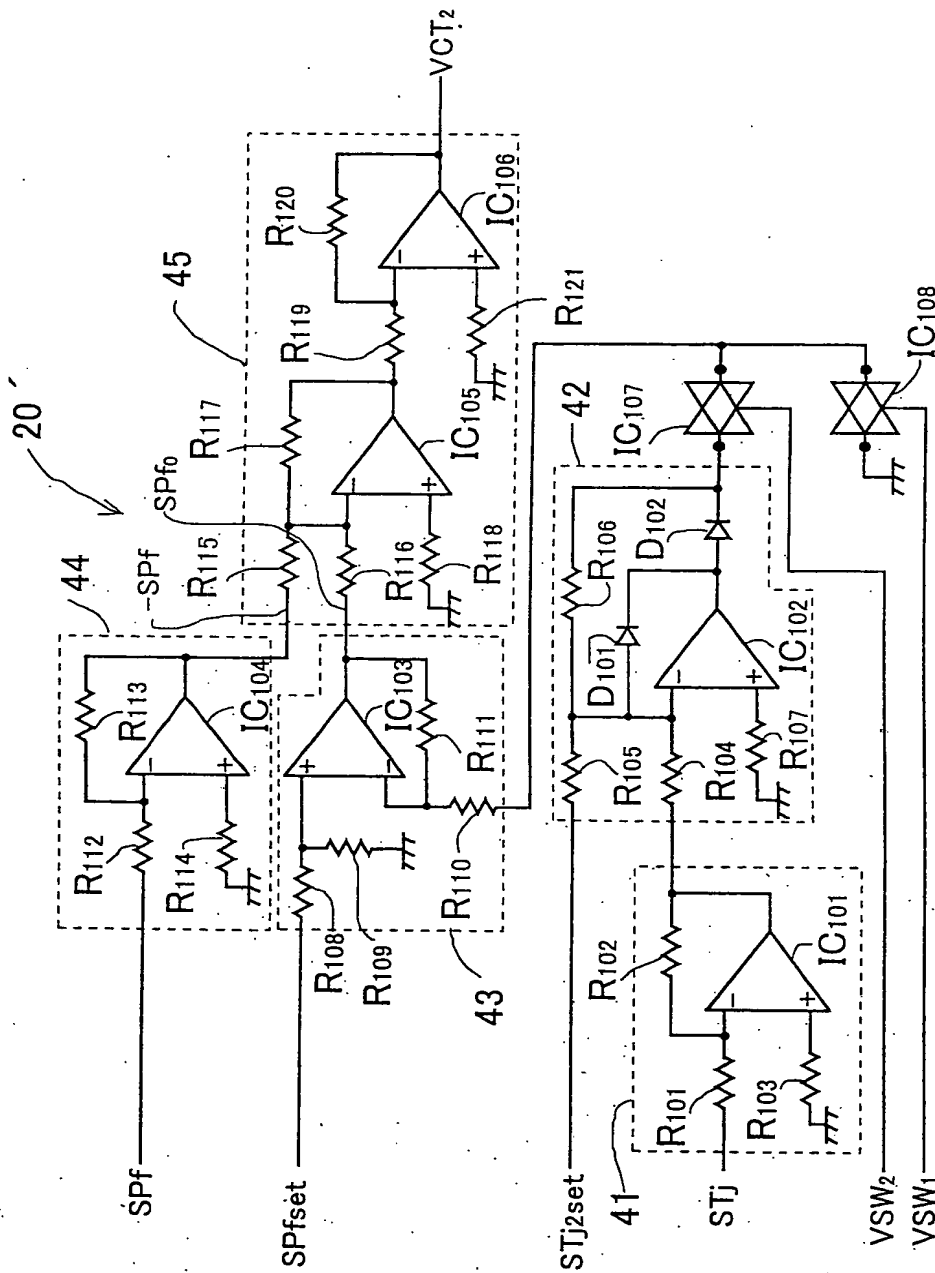
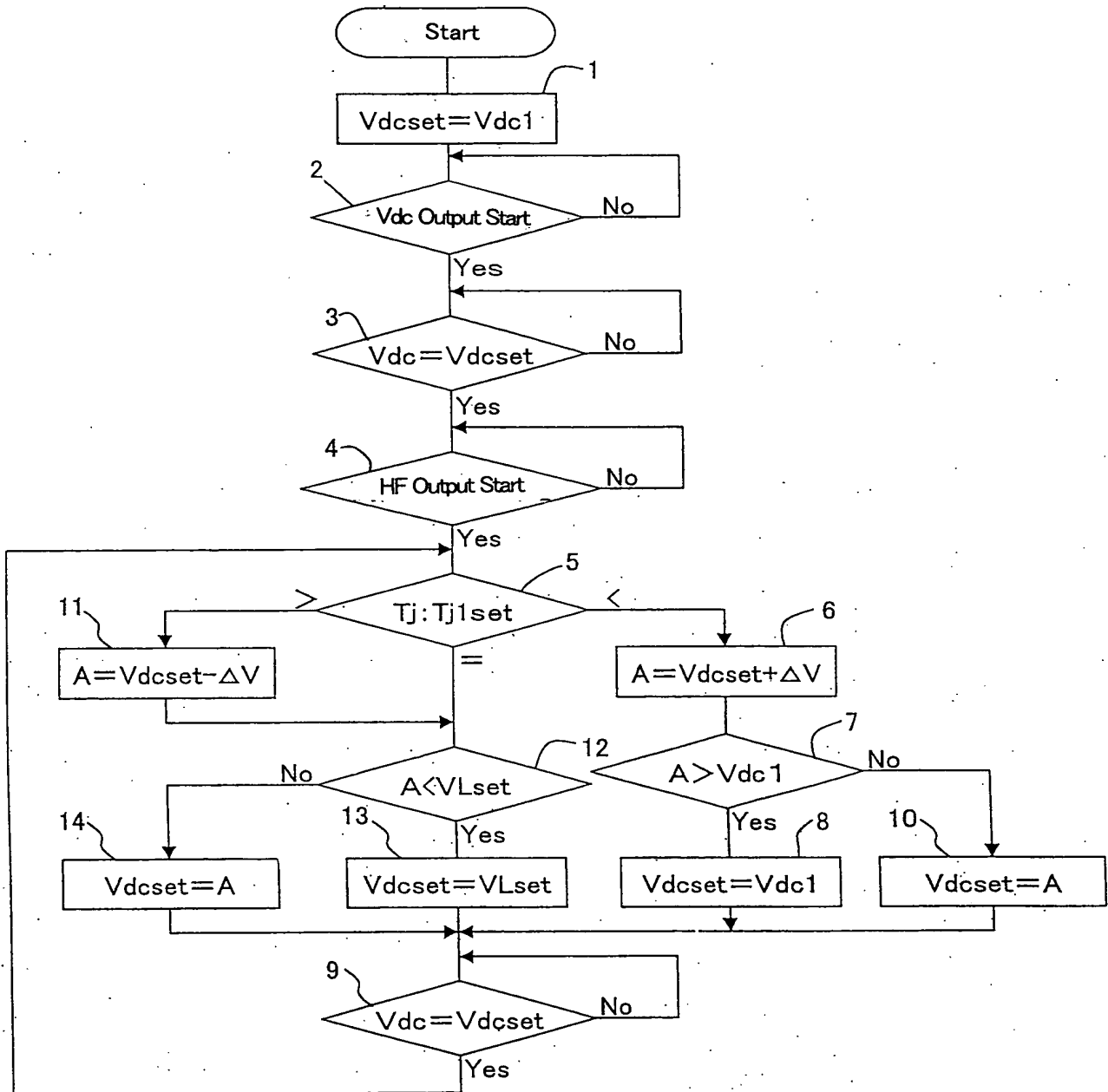
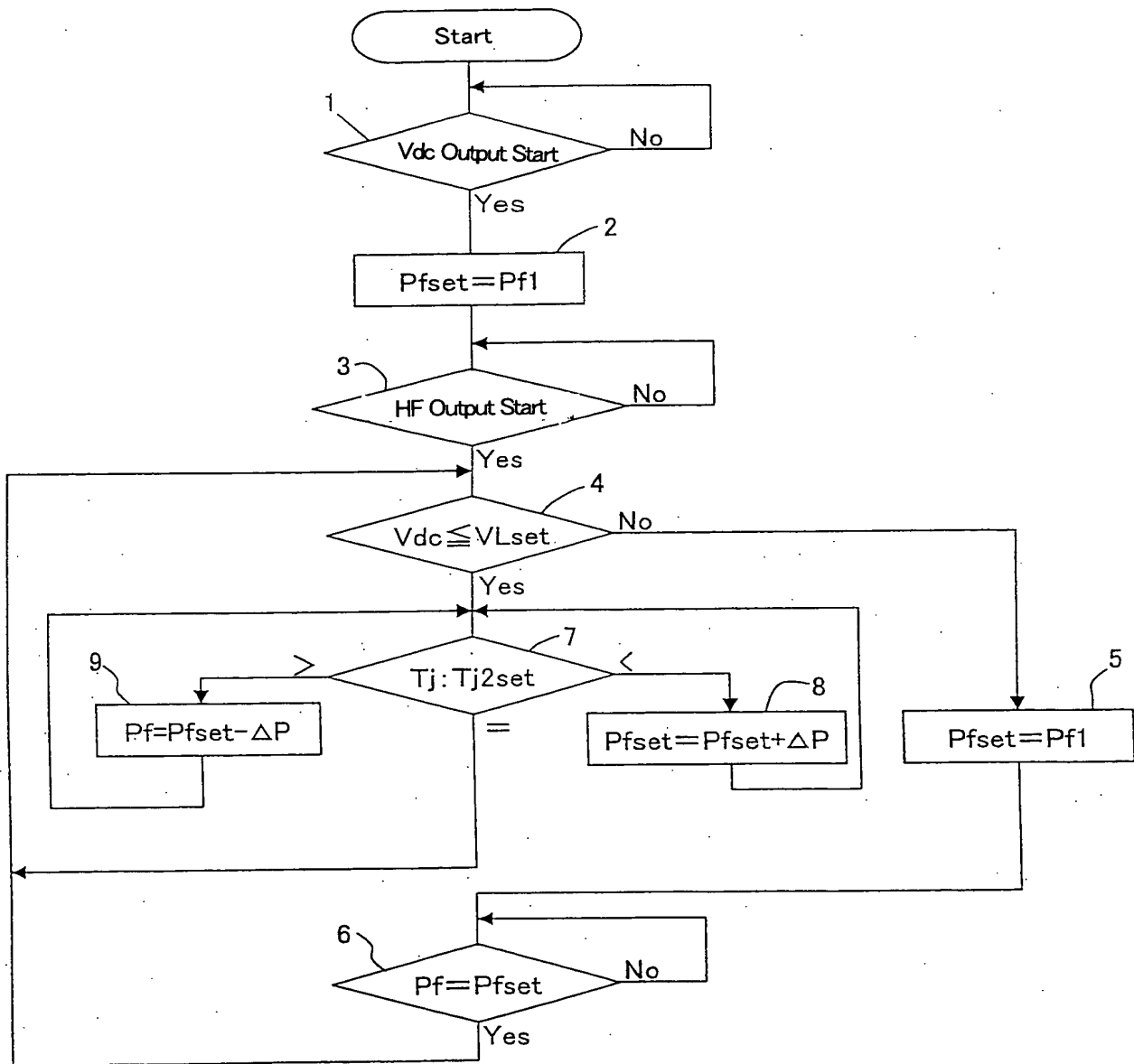


FIG. 20



Vdc ... Output Voltage of DC Power Supply
Vdcset ... Vdc Set Voltage
VLset ... Vdc Lower Limit Set Voltage
Tj ... Calculated Junction Temperature
Tj1set ... First Junction Temperature Set Value
Vdc1 ... Normal Output Voltage Set Value (Initial Value) of DC Power Supply
ΔV ... Fixed Small Voltage Set Value

FIG. 21



Pfset ... Forward Power Set Value
Pf1 ... Forward Power Set Input
Pf ... Forward Power Output Value
Vdc ... Output Voltage of DC Power Supply
VLset ... Vdc Lower Limit Set Voltage
Tj ... Calculated Junction Temperature
Tj2set ... Second Junction Temperature Set Value
 ΔP ... Fixed Small Power Set Value

FIG. 22

